

Í röð/Sequentially

Eina breyting á forritinu var það að gera for loopu sem keyrir NUMBER_OF_PROBLEMS sinnum og þar að leiðandi keyrir ekki neitt vandamál fyrr en það seinasta er búið.

Processors: 4

Solutions:

Problem: (557,160) - (110,177) - length: 464 - iterations: 217040
Problem: (461,73) - (99,155) - length: 444 - iterations: 204752
Problem: (615,254) - (394,470) - length: 437 - iterations: 188783
Problem: (296,109) - (34,279) - length: 432 - iterations: 243092
Problem: (85,493) - (61,440) - length: 77 - iterations: 11811
Problem: (263,29) - (336,608) - length: 652 - iterations: 329093
Problem: (279,152) - (618,465) - length: 652 - iterations: 383761
Problem: (276,214) - (2,334) - length: 394 - iterations: 263061
Problem: (113,34) - (489,423) - length: 765 - iterations: 342223
Problem: (60,307) - (350,354) - length: 337 - iterations: 149614
Problem: (393,490) - (64,8) - length: 811 - iterations: 406964
Problem: (493,167) - (222,265) - length: 369 - iterations: 183582
Problem: (422,584) - (107,589) - length: 320 - iterations: 125153
Problem: (216,64) - (525,344) - length: 589 - iterations: 304957
Problem: (626,79) - (148,152) - length: 551 - iterations: 200691
Problem: (303,611) - (328,206) - length: 430 - iterations: 191063
Problem: (313,267) - (603,279) - length: 302 - iterations: 181243
Problem: (232,148) - (381,22) - length: 275 - iterations: 133651
Problem: (423,194) - (398,320) - length: 151 - iterations: 45554
Problem: (119,429) - (111,580) - length: 159 - iterations: 48948
Problem: (13,309) - (113,149) - length: 260 - iterations: 74511
Problem: (279,35) - (623,21) - length: 358 - iterations: 147055
Problem: (413,605) - (248,223) - length: 547 - iterations: 260947
Problem: (130,454) - (548,561) - length: 525 - iterations: 296899
Problem: (297,432) - (392,501) - length: 164 - iterations: 53931
Problem: (436,382) - (324,618) - length: 348 - iterations: 213150
Problem: (359,475) - (441,372) - length: 185 - iterations: 68236
Problem: (299,273) - (344,252) - length: 66 - iterations: 8754
Problem: (431,263) - (150,389) - length: 407 - iterations: 270185
Problem: (553,90) - (379,333) - length: 417 - iterations: 160783

All done

Total time: 22302 ms

Á sama tíma/At the same time

Gert var nýan klasa að nafninu `makeNewRunnable.java`

Klasinn er með `private final` breytu sem per problem, sem er vandamálið sem tekið er inn, svo að hver þáður hefur sinn eigin þráð.

Það er farið í gegnum for lykkju til að búa til hvern þráð.

Líklegast ástæðan fyrir því að úrtakið kemur svona út er að þegar keyrt eru þráðana á sama tíma, þeir þræðir sem taka lengsta tíma að keyra verða seinastir, og þeir minstu fyrst eins og hægt er að sjá það með `length` og `iterations`. En það er ekki alveg fullkomið útaf það þáðirnir eru ekki keyrðir nákvæmlega á sama tíma svo ef þráðurinn er nógu fljótur að klára keyrsluna þá fer það bara eftir því hvaða þráður keyrði fyrst, eins og hægt er að sjá frá fyrstu 2 gildunum.

Processors: 4

Solutions:

```
Problem: (85,493) - (61,440) - length: 77 - iterations: 11811
Problem: (299,273) - (344,252) - length: 66 - iterations: 8754
Problem: (119,429) - (111,580) - length: 159 - iterations: 48948
Problem: (423,194) - (398,320) - length: 151 - iterations: 45554
Problem: (13,309) - (113,149) - length: 260 - iterations: 74511
Problem: (359,475) - (441,372) - length: 185 - iterations: 68236
Problem: (297,432) - (392,501) - length: 164 - iterations: 53931
Problem: (279,35) - (623,21) - length: 358 - iterations: 147055
Problem: (232,148) - (381,22) - length: 275 - iterations: 133651
Problem: (60,307) - (350,354) - length: 337 - iterations: 149614
Problem: (422,584) - (107,589) - length: 320 - iterations: 125153
Problem: (615,254) - (394,470) - length: 437 - iterations: 188783
Problem: (553,90) - (379,333) - length: 417 - iterations: 160783
Problem: (313,267) - (603,279) - length: 302 - iterations: 181243
Problem: (493,167) - (222,265) - length: 369 - iterations: 183582
Problem: (303,611) - (328,206) - length: 430 - iterations: 191063
Problem: (626,79) - (148,152) - length: 551 - iterations: 200691
Problem: (296,109) - (34,279) - length: 432 - iterations: 243092
Problem: (436,382) - (324,618) - length: 348 - iterations: 213150
Problem: (557,160) - (110,177) - length: 464 - iterations: 217040
Problem: (461,73) - (99,155) - length: 444 - iterations: 204752
Problem: (431,263) - (150,389) - length: 407 - iterations: 270185
Problem: (276,214) - (2,334) - length: 394 - iterations: 263061
Problem: (113,34) - (489,423) - length: 765 - iterations: 342223
Problem: (413,605) - (248,223) - length: 547 - iterations: 260947
Problem: (130,454) - (548,561) - length: 525 - iterations: 296899
Problem: (216,64) - (525,344) - length: 589 - iterations: 304957
Problem: (263,29) - (336,608) - length: 652 - iterations: 329093
Problem: (279,152) - (618,465) - length: 652 - iterations: 383761
Problem: (393,490) - (64,8) - length: 811 - iterations: 406964
```

All done

Total time: 3884 ms

Bara ákveðinn fjöldi í einu/only a few at a time

Bætt var við threadpool til þess að meðhöndla og stjórna hversu margir þræðir mættu keyra í einu. Áhrifin var sú að að fljótustu þráðirnir, í hverjum hluta keyrðu út fyrst. Til að taka dæmi með þráðinn sem er fremstur hér, með length: 77. Ef set var threadpoolið sem einhver tala sem er 4 eða minni þá myndi hún aldrei geta klárað fyrst og var yfirleitt sjú þriðja eða fjórða að klára, en umleið og talan var hækkuð, útaf hversu fljótt 77 var að keyra þá varð hún alltaf fyrst.

Processors: 4

Solutions:

```
Problem: (85,493) - (61,440) - length: 77 - iterations: 11811
Problem: (615,254) - (394,470) - length: 437 - iterations: 188783
Problem: (557,160) - (110,177) - length: 464 - iterations: 217040
Problem: (461,73) - (99,155) - length: 444 - iterations: 204752
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Problem: (263,29) - (336,608) - length: 652 - iterations: 329093
Problem: (279,152) - (618,465) - length: 652 - iterations: 383761
Problem: (276,214) - (2,334) - length: 394 - iterations: 263061
Problem: (493,167) - (222,265) - length: 369 - iterations: 183582
Problem: (422,584) - (107,589) - length: 320 - iterations: 125153
Problem: (113,34) - (489,423) - length: 765 - iterations: 342223
Problem: (626,79) - (148,152) - length: 551 - iterations: 200691
Problem: (232,148) - (381,22) - length: 275 - iterations: 133651
Problem: (393,490) - (64,8) - length: 811 - iterations: 406964
Problem: (423,194) - (398,320) - length: 151 - iterations: 45554
Problem: (313,267) - (603,279) - length: 302 - iterations: 181243
Problem: (119,429) - (111,580) - length: 159 - iterations: 48948
Problem: (303,611) - (328,206) - length: 430 - iterations: 191063
Problem: (216,64) - (525,344) - length: 589 - iterations: 304957
Problem: (13,309) - (113,149) - length: 260 - iterations: 74511
Problem: (297,432) - (392,501) - length: 164 - iterations: 53931
Problem: (299,273) - (344,252) - length: 66 - iterations: 8754
Problem: (359,475) - (441,372) - length: 185 - iterations: 68236
Problem: (279,35) - (623,21) - length: 358 - iterations: 147055
Problem: (436,382) - (324,618) - length: 348 - iterations: 213150
Problem: (553,90) - (379,333) - length: 417 - iterations: 160783
Problem: (413,605) - (248,223) - length: 547 - iterations: 260947
Problem: (130,454) - (548,561) - length: 525 - iterations: 296899
Problem: (431,263) - (150,389) - length: 407 - iterations: 270185
```

All done

Total time: 4799 ms